1   1.   A method of providing service for use in a Voice

2 Over Internet Protocol (VOIP) network environment comprising:

3   selecting a service level; and

4   measuring voice call listening quality according to

5 the selected service level for voice calls transmitted across

6 a VOIP network to produce voice call listening quality metric

7 values.

1   2.   The method of claim 1, wherein the selected service

2 level is associated with a type of voice codec.

1   3.   The method of claim 2, wherein the type of voice

2 codec comprises a waveform codec.

1   4.   The method of claim 1, wherein measuring comprises

2 measuring the voice call listening quality using a perceptual

3 test model.

1   5.   The method of claim 4, wherein the perceptual test

2 model comprises Perceptual Analysis Measurement System (PAMS).

1   6.   The method of claim 4, wherein the perceptual test

2 model comprises Perceptual Speech Quality Measurement (PSQM).

1   7.   The method of claim 2, wherein the type of voice

2 codec comprises a hybrid codec.

1   8.   The method of claim 1, wherein the voice call

2 listening quality metric value corresponds to a Mean Opinion

3 Score (MOS) value.

1   9.   The method of claim 1, further comprising:

2   using the measured voice call listening quality

3   metric values to determine whether a service level agreement

4   guarantee provided to a user of the VOIP network is met.

1   10.   The method of claim 1, wherein measuring comprises:

2   controlling test probes deployed along the border of

3   the VOIP network to engage each other in test calls and to

4   make voice call listening quality measurements based on the

5   test calls.

1   11.   The method of claim 10, wherein the test probes are

2   connected to VOIP communication devices that are connected to

3   the VOIP network.

1   12.   The method of claim 11, wherein the VOIP

2   communication devices comprise gateways.

1   13.   The method of claim 1, wherein measuring comprises:

2   controlling test probes deployed at edges of the

3   VOIP network to engage each other in test calls and to make

4   voice call listening quality measurements based on the test

5   calls.

1   14.   The method of claim 1, wherein measuring comprises:

2   controlling at least one test probe deployed at and

3   connected to a telephony network that is coupled to the VOIP

4   network by a gateway to generate test voice calls and to make

5   voice call listening quality measurements based on the

6   generated test voice calls.

22

1 15.   The method of claim 2, wherein the selected service
2 level is further associated with a VOIP signaling protocol.

1 16.   The method of claim 15, wherein the VOIP signaling
2 protocol comprises H.323.

1 17.   The method of claim 15, wherein the VOIP signaling
2 protocol comprises SIP.

1 18.   The method of claim 15, wherein the VOIP signaling
2 protocol comprises MGCP.

1 19.   A computer program product residing on a computer
2 readable medium for providing service for use in a Voice Over
3 Internet Protocol (VOIP) network environment, comprising
4 instructions for causing a computer to:
5   associate service levels with phone numbers; and
6   responsive to a test voice call directed to one of
7 the phone numbers, cause the test voice call to be transferred
8 over the VOIP network to a destination corresponding to such
9 phone number at the associated service level and causing a
10 voice call listening quality to be measured for the associated
11 service level to produce a voice call listening quality metric
12 value.

1 20.   The computer program product of claim 19, wherein
2 the service levels correspond to different types of voice
3 codecs.

1 21.   The computer program product of claim 20, wherein
2 the service levels correspond to different combinations of
3 voice codec types and types of VOIP signaling protocols.

23